

Case 07-08



**TOWN OF
QUEEN CREEK**

Date: May 2, 2007

To: MAG Specifications and Details Committee

From: Tom Narva, Senior Project Manager for Sewer and Water construction, Town of Queen Creek. Presented by Gerald L. Wright, Town of Queen Creek MAG Specifications and Details representative

Subject: Line and Grade pipe tolerance

PURPOSE:

I have debated this issue with others over the years and now that we have a MAG committee member with us, I request you get a clarification to the boxed area of the attachment.

I know that several municipalities in the valley have interpreted this paragraph in error, in my opinion, for many years. They read this as the allowable depth of water in a sag of a sewer pipe during a TV inspection. I feel that the interpretation of this paragraph is that the line (plan view from above) and grade (profile view from the side) be within the tolerances given. The line part, again in my opinion, is not as critical as the grade part of the paragraph. In most cases the profile of the sewer is a straight line between the invert elevations on the design at the manholes or the slope of the line. I read this paragraph as any spot on that grade line or slope needs to be within the tolerances provided. So if you are installing an 18" pipe at minimum slope or 0.0011, the design change in elevation from one end of a 20' length of pipe to the other end is 0.022' (about a 1/4 inch). With a tolerance of 0.10' +/- at any point on the grade line or slope, at the design upstream end of the pipe could be 0.10' low and the design downstream end of the pipe could be 0.10' high and still be within tolerance. The resulting math tells me the design upstream end of the pipe would have 0.178' or 2.136" of water in the sag and still be within tolerance.

I am not saying that this paragraph should be replaced, but that another paragraph should be added right after it, giving the depth of water in a TV inspection of a sewer line allowable for a given size of sewer. This will strengthen the municipalities' position on sags in sewer pipe and what is permitted in our sewers.

Tom Narva

**Example: 0.05 feet (5/8 inch) for 8 inches through 12 inches
0.10 feet (1 1/4 inches) for pipe greater than 15 inches**

Ponding water in excess of the allowable tolerance will be cause for rejection.

SECTION 615

(D) Closed Circuit T.V. Inspection:

The Contracting Agency reserves the right to visually inspect the interior of the sewer line using a television camera. Any defects in the pipe or construction methods revealed shall be corrected by the Contractor at no additional cost to the Contracting Agency.

Insert this paragraph:

The maximum allowable depth of ponding water in sewer pipe 8 inches through 12 inches diameter is 5/8 inch. The maximum allowable depth of ponding water in sewer pipe 15 inches and greater diameter is 1 ¼ inches. Ponding water in excess of these allowable tolerances will be cause for rejection.

The Contracting Agency will pay for the initial T.V. inspection. Any additional inspection(s) required, due to the failure of the initial inspection, shall be paid for by the contractor.